

THE CLAIMS

The claims after entry of the Amendment dated June 22, 2005 are as follows:

1. - 3. (Cancelled)

4. (Previously Presented) An image reading apparatus having a first mode for high resolution reading and a second mode for high gradation reading, said apparatus comprising:

a light source adapted to apply light to an original image;

a movable reading unit adapted to convert reflected light of said light source applied to the original image into a voltage;

a moving unit adapted to move a reading position of said reading unit at a speed which is the same for the first mode for high resolution reading and the second mode for high gradation reading;

a generator adapted to generate a driving signal for said reading unit, said signal having patterns which are varied in accordance with said reading modes, wherein a frequency of the driving signal in the second mode for high gradation reading is lower than a frequency of the driving signal in the first mode for high resolution reading, and an accumulation time of each of pixels of the driving signal in the second mode for high gradation reading is longer than an accumulation time of each of pixels of the driving signal the driving signal in the first mode for high resolution reading; and

a converter adapted to convert analog signals from said reading unit to a digital signal having a plurality of numbers of bits, wherein a number of bits in the second mode for high gradation reading is higher than a number of bits in the first mode for high resolution reading.

5. (Previously Presented) An image reading apparatus according to Claim 4, wherein said reading unit includes a CCD, and the driving signal includes a charge transfer clock signal and a reset clock signal of the CCD.

6. (Previously Presented) An image reading apparatus according to Claim 5, wherein the driving signal further includes a clock signal to sample a signal for the CCD and a clock signal to sample a reference level.

7. (Previously Presented) An image reading apparatus according to Claim 4, wherein the moving unit moves a carriage unit including said light source and said reading unit with a motor.

8. (Previously Presented) An image reading apparatus according to Claim 4, further comprising a processor adapted to execute a shading correction to a digital signal output from said converter.